

IDC PERSPECTIVE

Top Retail Generative AI Use Cases

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EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: Top Retail Generative AI Use Cases

Retailers are increasingly adopting generative AI (GenAI) to enhance customer support, in-store knowledge, and product discovery despite facing challenges like IT limitations and talent shortages. These top use cases align with GenAI's unique characteristics, offering significant efficiency and productivity gains.

Key Takeaways

- Over 63.8% of retailers have significantly invested in generative AI, focusing on capabilities like natural language understanding and generated content.
- Despite challenges such as complexity, talent shortages, and dependency on data, retailers continue to adopt GenAI driven by visible use case successes and the potential for immediate business value.
- The top GenAI use cases in retail include customer support chatbots and assistants, in-store associate knowledge bases, and retail conversational and contextual search/product discovery that align with GenAI's unique characteristics.

Recommended Actions

- Retail technology buyers should prioritize GenAI investments in use cases that align closely with GenAI's unique characteristics, require minimal operational change, and offer immediate results.
- Retailers must ensure robust data management practices including access, democratization, governance, and quality controls to fully leverage GenAI.
- Technology buyers should consider the broader strategic implications of GenAI adoption, focusing on exploring competitive differentiation as the technology matures.

Source: IDC, 2024

SITUATION OVERVIEW

More than 63.8% of retailers are spending on, or have significantly invested in, generative AI (GenAI). As a matter of fact, retail trails behind only the media and entertainment industry in the adoption of GenAI technology. This trend is neither a passing fancy for retailers nor a clouded vision of what GenAI has to offer. Rather, retailers have focused on GenAI capabilities, the most significant of which includes natural language understanding through a new interface technology and rapidly generated content. Retailers view GenAI much as they would most IT projects and investments — through a specific application lens where expectations are the completion of smaller modular projects as part of the whole. Despite the general shift for many GenAI-enabling vendors to push large-scale models and a fully verticalized engagement to build GenAI into multiple tools, most retailers don't have the abilities or resources to match these structural and transformative changes in their organizations. With tiny margins across most of the retail industry, projects need to pay for themselves plus fund the next generation of innovative proposals. This selective view of GenAI technology means less focus on platform-driven systems and more focus on tech partners who embed GenAI into their applications.

Adoption of GenAI and Challenges for Retail

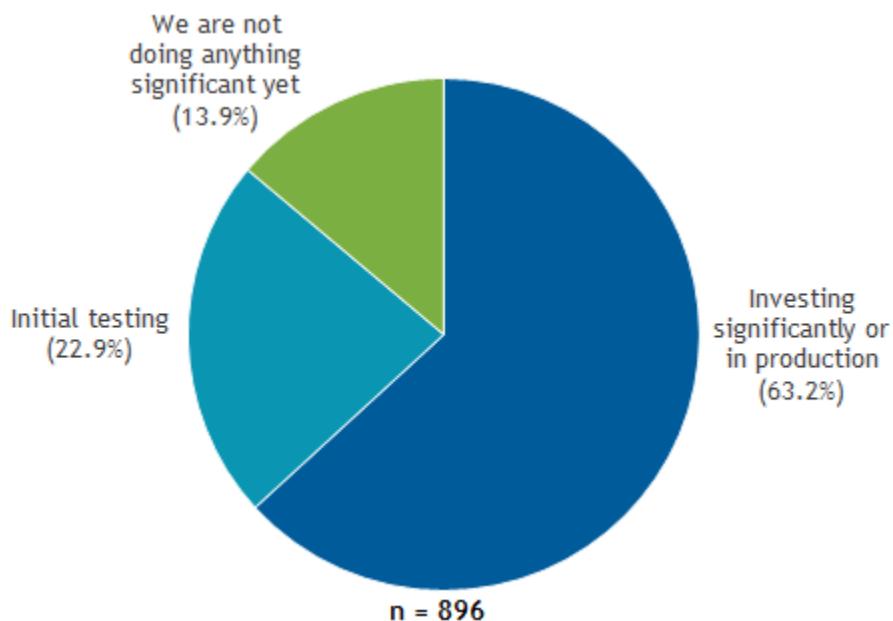
The adoption of GenAI hasn't slackened because of IT limitations, however, with larger retailers investing heavily. In April 2024, Amazon invested over \$2.75 billion into AI start-up Anthropic. Retail giant Walmart has continued to invest in GenAI technologies with major partnerships with Microsoft for its Azure OpenAI platform services. Walmart also invests internally in its tech-powered capabilities, driving almost \$10 billion in spending on information and communication technology (ICT) annually. For Walmart, GenAI is a staple technology in its repertoire.

However, several challenges exist. Retail adoption of GenAI has been a challenge due to complexity, talent shortage, and dependency on data to enable GenAI solutions. Other factors include the integration with legacy technology and long-established retail culture focused on less automation and more manpower. Even tech-focused retailers like Walmart manage over 2.2 million employees with staff in the hundreds for each of its 10,000 stores. Retailers are shifting from large-scale transformative initiatives (the root cause of many IT headaches) to smaller initiatives where a successfully completed retail project funds the next innovation. Barring top retailers, few retailers can properly fund and develop longer-term projects with 3.09% average net margins across their business (source: Aswath Damodaran, *Retail (General) Net Margins*, NYU Stern). The investment for retailers to "make ready" their infrastructure serves multiple purposes but also requires significant capex to deliver. The most significant projects are multi-purposed, not only enabling GenAI but also just as critically aiming to improve the data infrastructure, accessibility, democratization and governance necessary to drive multiple initiatives. These would span across GenAI, predictive and interpretative AI, and classic analytics. Retailers design initiatives to capture more than just an AI flavor. Smart retail executives are presenting to their boards the excitement of GenAI and the practicality of data-driven retailing.

Despite the challenges, retailers continue to adopt GenAI. Driven in part by fear of missing out (FOMO), visible use case successes, technology pundits, and market hysteria, executives have both invested in and applied GenAI in specific use cases (see Figure 2). The adoption levels focus on the highly specific use cases rather than general ones, and many retailers are reluctant to invest in much larger AI-driven platforms as viable mechanisms to drive GenAI across their entire enterprise. Instead, most have resorted to pilot programs and highly specific use cases that support measurable business value.

FIGURE 2

GenAI Adoption Across Retailers



Source: IDC's *Future Enterprise Resiliency and Spending Survey, Wave 2*, February 2024

Retail GenAI Use Cases Proliferate

Beyond multifunctional adoption, retailers develop multiple use cases for their organizations using GenAI. Most of GenAI begins with leveraging known issues and problem scenarios where the intuitive capabilities of GenAI provide potential gain. Use cases with intuitive GenAI are effectively the low-hanging fruit of GenAI and have quickly grown. Retailers adopt these solutions because of expected returns on the GenAI investment. Not all of these have been profitable, and in many cases it is far too early to discern lifetime value. However, these projects have enabled potential cost savings through improved productivity, increased efficiencies, or reduction of resources and have improved profitability through new monetization or increased conversion. The variety of use cases employ combined techniques of managing data or introduce simpler forms of automation or in some cases use deeper, contextual automation to deliver results. Most of these advancements for GenAI are incremental changes but we are still in the early stages of GenAI evolution where revolutionary changes are not yet expected nor realized.

GenAI Use Cases Categories

Across a sample of set of 73 active use case examples in the retail sector where some retailers have deployed multiple use cases, we noted a higher number of use cases specifically tied to digital activation of GenAI, usually experienced through online assets. IDC has classified these 73 active GenAI use cases into five categories for retail (see Figure 3). The categories are as follows:

- Experiential operations
- Merchandising and planning

- Omni-channel marketing
- Omni-channel experience and commerce
- Product life cycle, sourcing, and fulfillment

FIGURE 3

Definitions of Use Case Categories

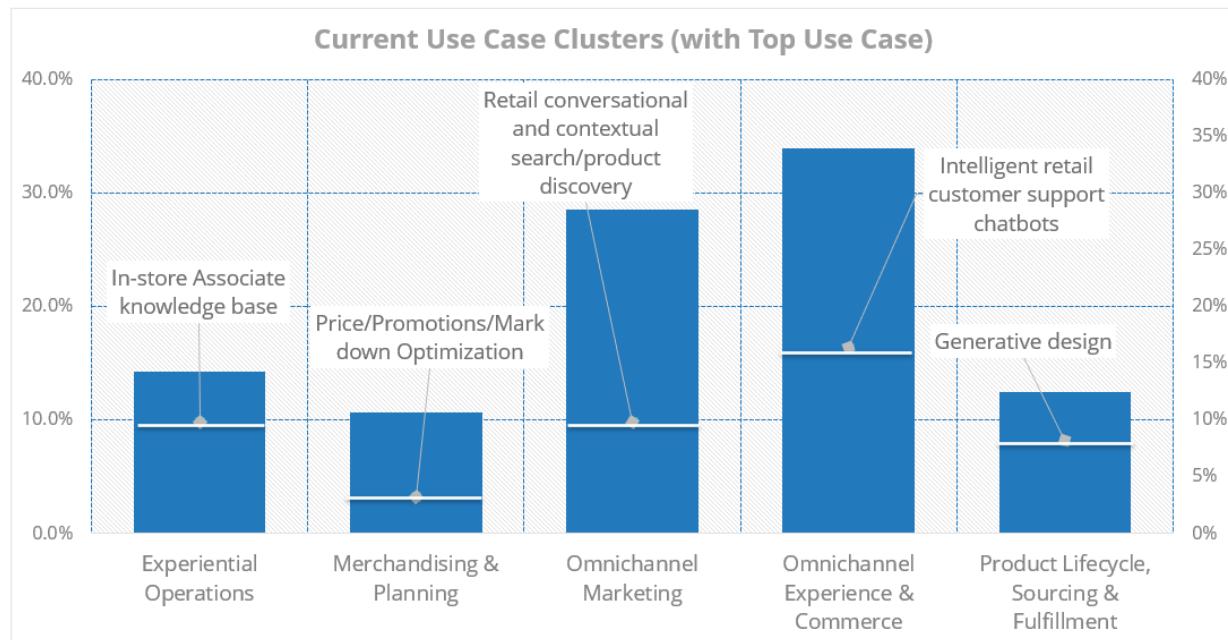


Source: IDC, 2024

Almost one-third of these use cases were related to omni-channel digital experience and commerce. However, many use cases also exist in the physical and in-store environments as well as with back-office solutions. Current use case clusters map GenAI use cases to the broader categories of retail (see Figure 4). The following figure shows the percentage of active use cases identified from IDC research that fits into each category with the most commonly occurring specific use case for each from our sample sets.

FIGURE 4

Generative AI Use Case Clusters



Source: IDC, 2024

The nature of the use cases begs the question — why are these the use cases that retailers have glommed onto? What makes them a focal point for retail? The answer is tied to GenAI characteristics, change management, and their uniqueness.

GenAI has a set of key characteristics that set it apart from other technologies. These characteristics are unlimited in potential as they can apply across diverse types of use cases, especially for retailers. Inherent to GenAI is the ability to manipulate data with a large knowledge base, access and classify unstructured data, and recognize and classify multimodal data in a similar context. GenAI's more unique capabilities include the human-machine interface that enables engagement at a conversation level with humans without losing precision, context, or meaning. In addition, a unique GenAI quality is its generative ability to offer variant responses through its inference engine in an appropriate context. The generative capability allows for establishing multiple answers from its vast knowledge base.

While there are examples of intangible gains, few current retail use cases are major drivers of new profitability and sales success. At present we are witnessing a myriad of improvements in productivity, advanced outputs, faster time to market, and primarily efficiency plays. While these use cases are not easily quantifiable, they do conform to exactly what modern technology applications in business should be doing — improving the business.

So despite these changes, why are a select set of use cases bubbling to the top for most retailers? The factors influencing this phenomenon across the past 18 months of retail experimenting, planning, piloting, and proof of concepts break down into the following three factors:

- Use cases that most closely align GenAI characteristics with retail challenges
- Use cases that require minimal operational change or offer an easy transition to new operational processes
- Use cases with immediacy of results

Most retailers will quickly abandon use cases — even if tried and tested — unless they also comply with the three factors identified.

Alignment of Use Cases

GenAI characteristics, specifically those that make them unique from other technology advancements, fall into the concepts outlined in the following figure (see Figure 5). *Achieving ROI With GenAI* (IDC #US49316123, September 2023) goes into further depth on each of these characteristics. The combination of the characteristics defines the uniqueness of GenAI. Interestingly, three of these characteristics are directly associated with data.

FIGURE 5

GenAI Characteristics Foundation

Characteristic		Initial CapEx \$		Data Complexity/ Effort		Time to Market	
Data	Knowledge Base	Low	Large Language Models are Intrinsic	Low	Large data store is intrinsic	Slow	Training required to build use case for larger models
	Unstructured Data	High	Training required with multiple use cases	Low	GenAI enables automated data association	Slow	Required training time for pattern development
	Multimodal	Mid	No Specific modality add-on costs	High	Compiled cross-mode understanding, taxonomy and rules	Slow	Retraining and cross-mode understanding
	Interface	Mid	Will require investing in existing solution options	Low	GenAI interprets using pre-defined solutions	Fast	Built-in interface with pre-defined routines and models
	Generative	Low	Repeatable but imperfect application	Mid	Probabilistic data generation	Fast	Already available routines and models

Note: For further information, see *Achieving ROI With GenAI* (IDC #US49316123, September 2023).

Source: IDC, 2024

Data Characteristics

Data forms the foundation of GenAI and a poor-quality data structure will quickly deteriorate any value gained. The first characteristic is the knowledge base that GenAI uses to develop outcomes. Retailers continue to grow their data stores with enormous amounts of data each year. In 2022, retailers collected over 4,000 Exabytes (EB) of data across point of sale, in-store video, customer information, loyalty programs, and more. The ability to capture and manage this data at such scale is a fundamental retail business challenge.

The data also requires classification if retailers seek to use it for any level of decision-making. GenAI provides the ability to handle unstructured and semi-structured data by recognizing similarities and

patterns as well as enabling tagging and classification automatically and at scale. GenAI can extend unstructured data and recoup value for a retail challenge driven by the amount of data collection.

The last of the data characteristics is the multimodal nature of retail data. Retailers collect video, text, financial data, encoded data, bar codes, SKUs, customer tokens, online tracking, and other formats. Retailer data sets include many data formats, but these may still be associated with each other and when combined can provide more meaningful data for the retailer when analyzed. GenAI tools can discriminate the word "panda" in a text context, a picture of a "panda," or a video of a "panda" scampering about from a streaming camera in a zoo. GenAI tools can recognize that all three formats refer to the "panda" in one context or another. In retail, for instance, a retailer capturing video data from a security video combined with tabulated financial data from an anomaly detection tool can form the basis for added information about a specific security issue. Combine this with customer data or POS transaction data and retailers can find a potential serial scammer who is shoplifting. Alternatively, retailers can prevent false accusation of a loyal customer who leverages a marketing loophole. GenAI tools address the need to classify and connect all modes of engagement from text to video.

Interface Characteristics

In addition to data characteristics, GenAI tools are unique in their ability to enable an interface for communication between humans and machines. GenAI interfaces now offer humans a way to communicate intention where machines can proactively understand (or more accurately, probabilistically estimate) the context and meaning of human inputs. The capability of interfaces has developed an entire body of knowledge — called prompt engineering — related to development of the questions to map GenAI responses as well as narrow search and context for human prompt requests.

For the retail practitioner, the ability to interface directly with computational tools is a tremendous advantage and extends beyond the standard fare of natural language processing (NLP) or even natural language understanding (NLU) — both predictive and traditional AI capabilities developed over decades. The applications of the interface capabilities are critical pieces of the GenAI unique user capabilities as they allow for the translation of human desires into machine-driven outcomes. When connected to comprehensive systems, the possibilities become endless as humans no longer need to operate in pseudonymous high-level languages but rather in the highest-level language of all — English. Such tools can now accomplish goals from software and IT solutions to business direction and market conditions using human communication.

Generative Characteristics

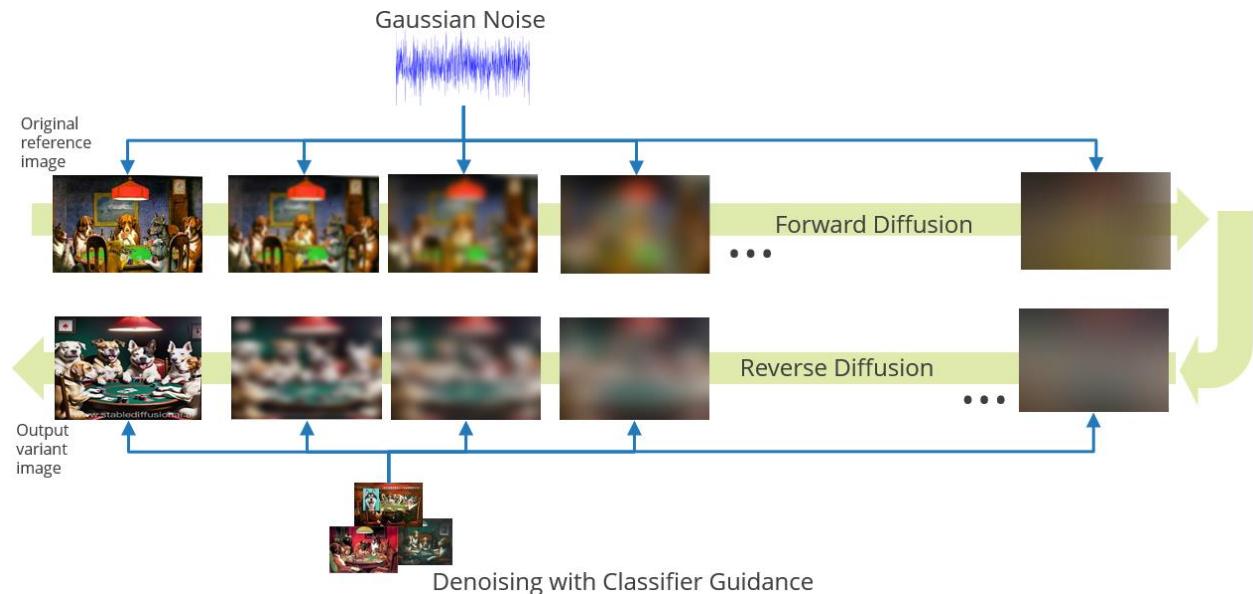
Beyond data and interface characteristics of GenAI, retailers can develop use cases that align with generative characteristics. Generative AI offers the ability to generate artifacts that are associative in nature to the original through various technologies. By associative, we mean artifacts such as images, text, sentences, video, audio, other data formats, and combinations that GenAI tools can generate that have similar attributes as the original artifact.

GenAI can generate similar artifacts that carry many of the same attributes or parameters as the original. Technologies are regularly developing various underlying technologies such as diffusion, generational adversarial networks, variational encoders, and transformers with new GenAI technologies. IDC offers multiple documents on concepts such as foundational models and platforms that retailers can use, but the result is driving generation of similar artifacts. For instance, advanced diffusion models such as Dall-E 2, Glide, and Imagen can generate a new artifact such as a variant image of dogs playing poker through first adding noise to an existing image of dogs playing poker and

then iteratively removing the noise to create a new, realistic version of dogs playing poker based on an image library (see Figure 6). Inputs for classifiers and guidance can be active reference images or text generated imaging based on a generative pretrained transformer (GPT) model.

FIGURE 6

Dogs Playing Poker — Diffusion Model Process



Source: IDC, 2024

Generative capabilities of GenAI are primarily associative capabilities. These techniques enable the "creativity" of GenAI — or at least a semblance of creativity. The fact that GenAI accesses enormous knowledge bases makes it difficult for humans to follow the "thinking" process of algorithms. As a matter of fact, the transparency that many AI vendors share is only transparency into the input criteria for their algorithms, not necessarily details about how a specific algorithm computed an output or outcome. By associative, we mean that items are classified and associated similarly based on their attributes. GenAI offers many different forms of models to achieve "creative" goals, but they all fall under a data limitation. That limitation may be bound not only by technology but also by understanding what is known about the subject matter.

The common theme of "creating" is not simple, and GenAI does not create anything more than variations of existing data with some kind of training (usually human driven) that allows it to accept certain types of responses. GenAI just doesn't have the capacity to "imagine" anything it hasn't seen in some form before — which is a substantial limitation compared with the human mind.

While creativity is important for concepts such as marketing creative and copy or natural language processing, the algorithms take the accepted norm and modify it slightly to remain within the boundaries of its training. Models are a critical piece of the puzzle. Associative capabilities are one of the more amazing advancements of GenAI. As described previously, advanced diffusion models in

GenAI can accomplish this association. The generative capability allows for the creation of variants for original concepts based on text, existing images, or other factors.

Other models such as generative adversarial networks (GAN) exist. These tools create two sets of artifacts, one real and one false — again by adding noise to the mix. The GAN then discriminates which is fake and which is real. As it trains, a GAN will go through many iterations until it can no longer appropriately distinguish a false data artifact from a real one. The discrimination process continues until the system has a realistic data artifact based again on its overall knowledge base and criteria for a "real" artifact. Similarly, variational autoencoders (VAEs) use a token or code to represent data based on attributes of the artifact. The VAEs use an encoder and decoder to transform the code with similar techniques to data compression methods. The decoder will reconstruct the data into content similar to the original version that was introduced. Transformer models use the VAE model concept with encoders and decoders as part of a set of foundational models such as bidirectional encoder representations for transformers (BERT) that allow the algorithm to train on a masked language model (MLM) that trains two different sets of results. BERT tools are then used to validate whether there is a predictive correlation between the two results to determine connectivity. Transformers feed into large language models (LLMs) that allow the capture of the sequential nature of concepts and context to be introduced by using parallel processing of data, including unlabeled data. The various algorithms of AI continue to grow and vary, but they are all rooted in a very specific fact tied to creativity. All GenAI tools must operate based on known data. According to a quote from the document *IDC TechBrief: Future of Customer Experience — Generative AI Consulting Services for CMOs* (IDC #US50736723, June 2023), "the adoption process may start from a different ... perspective by asking what could be the business benefits of the new technology." Especially in retail, retailers do not scope data sets widely outside of customer service or product search, meaning that the data is narrow and specific to a function — whether it's routing information for a truck LTL load, a payment transaction in the store, or a product item placed on a planogram shelf.

Generative models have built in learning capabilities using standard machine learning techniques that learn patterns in their training data sets to establish, discriminate, and/or generate outputs with similar attributes. Input, rules, and training data may be multimodal in nature such as text, images, video, audio, or other custom structured data sets. The output will be a function of these data sets. The generative capability does not extend to "creation" or imagination for the tools but rather to incremental variations of existing concepts and artifacts.

What brings these models together is the subjective view necessary to train the models in the first place. Training the models with different data sets will define the outputs the models will generate in real time based on the applied function and operational use cases. Use cases that align well with these characteristics — whether data, generative, or interface based — allow for unique applications of GenAI in lieu of other technologies that are more constrained in managing these capabilities. For instance, while predictive AI tools can manage a chatbot interface and offer appropriate responses to language inputs, the GenAI version expands the ability for the tool to engage at scale, across a broader knowledge base, and with more accuracy and precision for the retailer. The alignment of the characteristics with the use case demands offers a logical, intuitive, and efficient fit for GenAI.

Minimal Change or Easy Transition

The second factor for use case adoption is the ability to build and execute the use case with minimal change to existing, current processes or an easy transition to new processes, limiting disruption or business setbacks. Fewer touch points with customers, limited involvement from staff, and typically an

inherent automation of any related processes result in adoption of such use cases. There is also lower dependency on data, resources, and targeted outcomes in such use cases. An alternative to minimal change is an easy transition to new processes. This usually means an intuitive change in processes for retailers or embedded processes with limited change.

Minimal-change use cases might include swapping out a simple tool used in a retail process that completes a task faster or with greater accuracy, while an easy transition change might mean eliminating a step in an existing process altogether where the change is beneficial from a productivity perspective.

Immediacy of Results

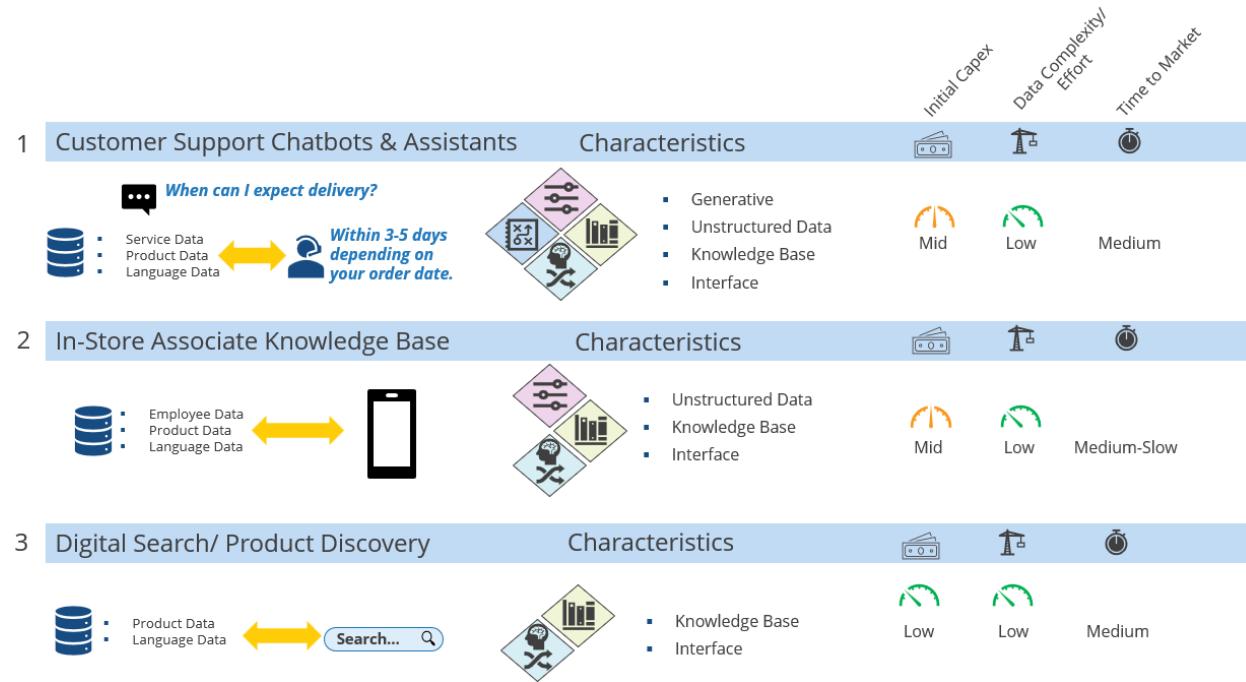
The third factor for use case adoption is rapid results and outcomes tied to business goals and objectives. This may mean limited quality assurance, limited risks in the event of hallucinations, and data availability to make decisions in real time. The expectation that rolling out certain use cases can immediately change market conditions seems a bit far-fetched — especially when thinking of technology — but GenAI modules and tools have advanced to the level of composable microservices that can deliver on specific tasks and functions quickly without enormous risk to the overall operations of the business. The value from such implementation can have immediate impacts and over time these impacts can be substantive. Immediate results may affect productivity, new revenue, efficiency of existing tools, and other measured factors. However, there are some inherent assumptions and these include the existing or ongoing measurement of outcomes. In some cases, the GenAI use case output is a new metric. This means retailers haven't factored in or computed the effort to measure as part of the return on investment (ROI). Use cases with new metrics usually require some pilot execution before yielding strong results, but depending on the use case results can be ascertained rapidly.

The Top Use Cases for Retail

The top 3 use cases for most retailers include the following, as shown in Figure 7.

FIGURE 7

Top GenAI Use Cases for Retail



Source: IDC, 2024

Use Case 1: Customer Support Chatbots and Assistants

"Customer support chatbots and assistants" has been the most frequently deployed GenAI use case from our sample of GenAI use cases across the retail industry. These use cases comprised over 16% of the sample set of retail use cases and are the intuitive selection for GenAI specifically because these use cases overlap four key GenAI characteristics as shown in Figure 7. These use cases typically have mid-level initial capex, low data complexity, and a medium time to market. More importantly, the customer support chatbots firmly fit in with the key use case criteria. Specifically, the use case aligns nicely with GenAI characteristics and offers a logical replacement of existing IVR and other customer support tools, and results are almost immediate where a trained GenAI tool will be able to recognize basic requests and will continue to improve with more engagement and formalized machine learning. There most likely would be a bit of a training cycle, but the tool can leverage general language data sets and GPT-style options at launch with fine-tuning, retrieval augmented generation (RAG), prompt engineering, and preconfigured, grounded data sets at launch to focus on appropriate results and set boundaries to the data and responses.

Alignment with GenAI characteristics is an important feature of this use case, in part because standard IVR tools and natural language processing tools have limited vocabularies and require extensive work in being able to place and identify context for prompt inquiries. The nature of the chatbot design includes prompt-based solutions where customers would directly ask questions for a response. In addition, the customer-support pieces will quickly learn the system's most frequently asked questions (FAQs) or have these prebuilt with fine-tuning during training.

The workflow process is straightforward with expectations to eliminate common chat questions and escalate more complex questions to customer service representatives. The fact that replacement of existing systems is straightforward makes it highly attractive, although some CIOs will be reluctant to move away from complex, costly customer service systems that are already in place. The process change will be a leadership and culture challenge, not a technical challenge.

The snap change for workflow translates into immediate results. Retailers can expect faster routing to customer service reps as needed, higher productivity, and more seamless engagement with customers for what they are seeking.

Customer support chatbots and virtual agents offer intelligent support through real-time and retail-specific data and analytics, manage FAQs and other support tasks on demand, and enable rapid scalability.

Example: Otto Group's AI Assistant Chatbot

Otto Group is testing an AI assistant tool that enables FAQs using product reviews. The AI assistant responds to customer prompts with an answer within seconds based on existing reviews, the product description, and the product title.

Deployments

Other deployments across this use case include companies such as Colgate-Palmolive's GenAI landing page efficiency chatbot, The Fresh Market, Canadian Tire, IKEA, and Carrefour's Hopla chatbot.

Use Case 2: In-Store Associate Knowledge Base

A bit of a distant second but significant use case — comprising almost 10% of our sample retail use cases — is the in-store associate knowledge base. Instead of being customer facing, this knowledge base focuses on the employee in the store. More specifically, the solution includes not only question-and-answer capabilities but also employee management issues including scheduling, HR management, task management, workforce development, and access to deeper product knowledge and specifications than the self-serve models of typical customer chatbots. The focus is on knowledge curation rather than problem solving or troubleshooting. These systems are integrated in store to be managed by specific employees or connected through various multimodal tools such as headsets or mobile devices to include communication as well. The in-store associate knowledge base provides deep knowledge access to employees, automates data classification, and includes access to customer and product information as well as rapid data democratization across a variety of data stores.

The use case aligns well with GenAI characteristics and focuses on the knowledge base and interface. In addition, while the tool is a new addition to a portfolio of tools, the knowledge base can replace or supplement specific front-end tools such as an HRIS system and some product data system access interfaces. This allows for easier access with minor transition costs to implement. The results will be immediate as new employees will be able to ramp up instantly once they've learned the basics of asking the tool, making them almost as productive as more senior employees.

Example: Tractor Supply In-Store Knowledge Management

Tractor Supply uses a GenAI tool to deliver knowledge directly to team members through their headsets. The tool responds to questions and answers with understandable responses that address

the request. The tool enables associates to pull up product specs and recommendations including product locations in the store as well as HR and company information.

Deployments

Other deployments across this use case include companies such as Otto Group, FamilyMart, Instacart's meal planning application, and Unilever's recipe management tool.

Use Case 3: Retail Conversational and Contextual Search/Product Discovery

In line with the knowledge base use case and comprising about 10% of sample use cases is the digital search/product discovery use case. This use case also identifies as retail conversational and contextual search/product discovery. The focus of this use case is faster, more effective search for products based in part on the context and the conversational data shared by the user. The use case is primarily customer facing as opposed to employee facing or back office. Specifically, this use case does not consider personalized information about the user other than the immediate information that the user shares or in-session information when engaged in a digital medium.

The use case aligns with the knowledge base and interface characteristics of GenAI and leverages data primarily from product and language data systems. While not leveraging other characteristics, the primary focus of the search is accessing product information within the context of the user's needs. The use case allows for integration with existing customer workflows where search and product discovery are common, requiring minor changes to high-level processes. Like other use cases, a prompt-response interface is implicit for search. The results are immediate with improved searches impacting customer experience, accuracy, faster purchasing, and customer retention metrics.

Conversational and contextual search leverages natural language processing and considers contextual factors including customers' location, shopping history, probabilistic behavior, and preferences to inform the interaction between the shopper and the merchant.

Example: Carrefour's Hopla Chatbot

Carrefour has integrated a chatbot based on ChatGPT, Hopla, into its company website, giving shoppers the ability to use natural-language AI to assist them in their daily grocery shopping. Customers can find "intelligent assistance" on the company home page and consult it in choosing the best products based on their budget, food intolerances and allergies, or even specific menu ideas.

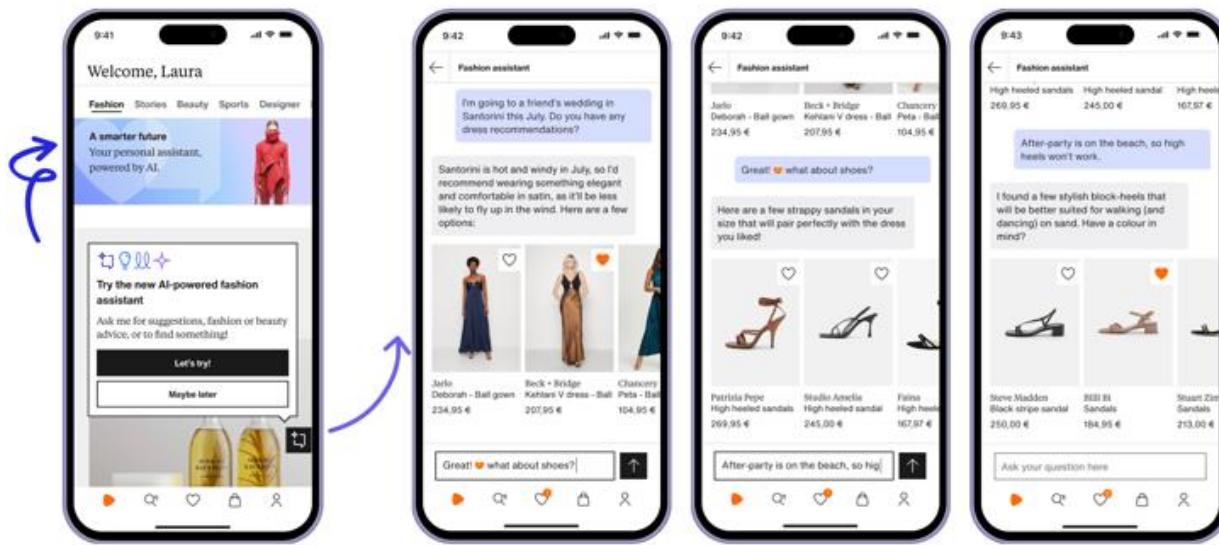
Deployments

Other deployments include Walmart's GenAI search, Zalando's fashion assistant (see Figure 8), Amazon's GenAI Rufus search tool, and Myntra's product discovery app functionality.

Note: All numbers in this document may not be exact due to rounding.

FIGURE 8

Zalando GenAI Chatbot Assistant



Note: For more information, visit corporate.zalando.com/en/technology/zalando-launch-fashion-assistant-powered-chatgpt.

Source: Zalando, 2024

ADVICE FOR THE TECHNOLOGY BUYER

Many factors impact the shift for retailers toward leveraging GenAI use cases. The top retail use cases bring many advantages but as you focus on this body of technology, keep in mind some of the more critical notes. In detail:

- **The top GenAI retail use cases are not necessarily differentiating:** While the top use cases are exciting and provide retail tech buyers an avenue to explore and experiment with GenAI, these technologies will quickly become the status quo. Most retailers will adopt variations of these capabilities either built in-house, as a direct acquisition from third parties, or embedded within other technology solutions they purchase. The capabilities promise enormous value to the retailer, but many retailers will assume the value within the next 24 months.
- **Costs to implement will drop:** As adoption of GenAI becomes more ubiquitous, the implementation costs will continue to drop. Scaled SaaS-based solutions are already available for full-fledged GPT transformer models with companies like OpenAI and Google offering new options to purchase access to the models instantly on a consumption basis. Over 650 start-ups are on the sidelines developing solutions across the board in the GenAI space which will drive toward lower cost, more availability, and included infrastructure that will help tech buyers find the right solutions. The costs will also drop for in-house builds as well as for completed solutions and managed services across retail.
- **Data remains the key currency:** The essential piece of the puzzle for leveraging GenAI is your data. Retailers won't be able to make the jump to a GenAI model without the proper data access, democratization, governance, and quality controls. More importantly, fine-tuning and

data-driven grounding of data for the use cases will be unachievable without these data capabilities in place prior to launching GenAI solutions.

- **Most GenAI use cases drive efficiency and productivity, not revenue:** Tech buyers need to keep in mind that the first set of top GenAI retail use cases are primarily efficiency plays. These solutions will improve your customer satisfaction and experience, reduce time and effort for employees to achieve tasks, and offer access to the right type of information when needed. Actual conversion for customers will be a secondary, indirectly achieved target, and initial metrics need to be associated with productivity and efficiency.
- **The top GenAI retail use cases cater to different audiences:** Each of the top 3 GenAI retail use cases engage vastly different user audiences. For instance, the first use case targets third-party customer support teams and customer service groups and suggests some self-service capabilities, but primarily for an end user engaging a customer. The second use case is designed for the associate as well as to help the employee manage their own productivity, including engagement with clienteling and customer communication. The third use case focuses fully on a digital customer self-service through search and product discovery. The fact is that each use case applies to differing user audiences. Keep in mind the values and goals you're trying to reach while highlighting the specific user audience that translates into the most value for your organizational strategy.

Potential Growth and Future Top Use Cases

IDC identifies over 20 initial use cases with active development and build out in the retail community. Each has at least one retailer or CPG building and running with these use cases. Stay tuned for aggregate reports on retail use cases overall and the characteristics that make them powerful GenAI opportunities in the market. The expectations are that as GenAI matures, retailers and their partners will continue to develop new use cases that will top the prior ones. Find ways to leverage broader GenAI strategies to build your solutions for enterprise-wide growth rather than just a few specific use cases. These may be a great starting point, but eventually you'll need to catch up to your competition.

LEARN MORE

Related Research

- *Top 5 Views for GenAI and Analytics at NRF 2024* (IDC #US51829524, March 2024)
- *Generative AI Use Case Taxonomy: The Engineering R&D Function* (IDC #US51850324, March 2024)
- *IDC PeerScape: Retail Intelligence Practices to Apply GenAI Across Use Cases* (IDC #US51224222, September 2023)
- *Achieving ROI with GenAI* (IDC #US49316123, September 2023)
- *IDC's Worldwide Digital Transformation Use Case Taxonomy, 2023: Experiential Retail* (IDC #US50023223, August 2023)
- *IDC TechBrief: Future of Customer Experience – Generative AI Consulting Services for CMOs* (IDC #US50736723, June 2023)
- *Web 3 and Generative AI: Retail Industry Expectations, Technology Adoption, and Prospective Use Cases* (IDC #EUR150593623, May 2023)
- *Intelligent Retail Decision Making at NRF 2023* (IDC #US50352723, February 2023)

Synopsis

This IDC Perspective discusses the top retail generative AI (GenAI) use cases. Over 63.8% of retailers are investing in generative AI, focusing on use cases like natural language understanding and content generation despite facing challenges such as IT complexity and talent shortages. Retailers prioritize GenAI applications that offer measurable business value with top use cases including customer support chatbots, in-store associate knowledge bases, and digital search/product discovery. These applications align with GenAI's unique capabilities, offering potential for improved efficiency, productivity, and customer engagement.

"Generative AI is taking the retail industry by storm — what we think is an innovative use case now will be routine in less than 18 months." — Ananda Chakravarty, research VP, IDC Retail Insights

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